

DEVICES AND METHODS FOR SEPARATING CONSTITUENTS**ABSTRACT OF THE DISCLOSURE**

[00113] The subject invention includes constituent separation apparatuses that include a fluid pathway and a pair of spaced-apart electrodes positioned within the pathway for detecting current flow within a mobile phase present in the pathway. Coupled to the pair of spaced-apart electrodes is a mix ratio determinator for determining the mix ratio of the mobile phase from the detected current flow. Also provided are methods that include contacting a mobile phase with an apparatus for separating constituents of a mobile phase, detecting the current flow of the mobile phase when the mobile phase is in contact with the apparatus and determining the mix ratio of the mobile phase from the detected current flow. The mix ratio may be adjusted based on the determined mix ratio. Algorithms for practicing the subject methods are also provided on computer readable mediums. Systems and kits for practicing the subject methods are also provided.